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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,790	03/18/2002	Anders Engqvist	ENGQ3001/JEK	8656
23364	7590	08/11/2006	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			MISTRY, O NEAL RAJAN	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/926,790

Applicant(s)

ENGQVIST ET AL.

Examiner

O'Neal R. Mistry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-6 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-6 and 9-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/12/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/30/6 has been entered.

The response received on 5/30/6 has been placed in the file and was considered by the examiner. An action on the merits follows.

***Response to Arguments***

The arguments filed on 5/30/6 have been fully considered. A response to these arguments is provided below.

**Examiner's Response:**

Applicant's arguments with respect to claims 2-6, 9-13 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-6, 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conners et al (USPN 5,761,070) in view of Bennet et al (6,463,402).

In regards to claim 12, Conners discloses using an optical image analysis system to perform an optical image analysis (col. 18 lines 19-31) for determining positions of individual points of a wood surface profile from an optical image of the log end (col. 38 & 39, Note the examiner interprets the system using the grain sorting. The grain sorting is done by determining the edges of the log. Next, the system finds the vertical edges to determine points on the log, for the method of sorting.).

Conners does not expressly disclose using at least one further measurement system to determine position so the individual points on the log end, and combining the position determined from said optical image analysis system and the positions determined from the said at least one further measurement system to create an adequate wood surface profile.

However, Bennet discloses using at least one further measurement system (col. 8 lines 35-53) to determine position so the individual points on the log end (col. 8 line 55- col. 9 line 5), and combining the position determined from said optical image analysis system and the positions determined from the said at least one further measurement system to create an adequate wood surface profile (col. 9 line 60 – col. 10 line 10, ie the examiner interprets that the system finds the center of the log end piece, and determines distance along the axis of the log to create log surface profile.).

Conners & Bennet are combinable because they are from the same field of endeavor i.e. lumber image analysis (Conners, col. 1-2) & (Bennet, col. 1-2).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Bennet into the system of Conners.

The suggestion/motivation for doing so would have been to provide a full model of log's surface, rather just silhouette, and to model the log's cross sections using enough surface points to accurately reflect the shape of the log, rather than using approximating circles or ellipses (col. 3 line 25-50), as taught by Bennet.

Therefore, it would have been obvious to combine Conners with Bennet to obtain the invention as specified in claim 12.

In regards to claim 2, Conners in view of Bennet discloses the optical image analysis system creates an image of a log end, which image is created by a non-transradiating technique (col. 4 lines 5-10, '070).

In regards to claim 3, Conners in view of Bennet discloses a log end image, obtained by the optical image analysis, is combined with positions for individual points in the log, whose positions have been obtained with another, under bark measuring system in order to determine the wood surface profile (col. 7 line 20- col. 9 line 32).

In regards to claim 4, Conners in view of Bennet discloses a log end image, obtained by said optical image analysis, is combined with positions for individual points on the log, whose positions have been obtained with another, on bark measuring system in order to determine the wood surface profile (col. 18, Note the examiner interprets the system scan the outside of the wood for color, and depending on the color the system uses this information to categorizing the log, '070).

In regards to claim 5, Conners in view of Bennet discloses a log end, obtained by the optical image analysis, is combined with another log end image obtained with some other measuring method (col. 21,'070, Note the examiner interprets that system uses

two different methods of imaging a piece of wood. The first is by scanning the piece of wood for different types of color, and second is to scan the grain lines of the log. Depending on the both imaging methods the system afterwards make decision on the type of wood and then sorts the log.)

In regards to claim 6, Connors in view of Bennet discloses a log end profile, obtained by said optical image analysis, is replaced or combined with another log end profile, obtained with some other measuring method, in the those areas of the wood surface profile where the wood surface profile obtained by the image analysis is less accurately determined than the wood surface profile obtained with some other measuring method for the same area (cols. 12, 13, & 14, Note the examiner interprets that the system uses two different image methods, imaging color and imaging grain. The system operates both methods, but if one method does not operate functionally, the system will using the other method of images for sorting the piece of wood. For example, if the system performs a color image on a piece of log, and one camera picks up a light and other camera picks up dark brown, the system will using imaging grain method for sorting, because the information was not accurate by imaging color method. The examiner interprets this to read on the claim limitation, as taught by Connors. & cols. 8 line 9 – col. 9 line 59 In addition, the examiner interprets that Bennet discloses two methods of determine the log characteristics. The first method, uses 2 different cameras to create an accurate map cross sections of a log to determine the profile, and, the second

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method, by using the coordinate system to determine the length of wood surface profile.)

In regards to claim 13, Conners discloses an optical image analysis system for determining point positions of individual points of a wood surface profile from an optical image of the log end (col. 38 & 39, Note the examiner interprets the system using the grain sorting. The grain sorting is done by determining the edges of the log. Next, the system finds the vertical edges to determine points on the log, for the method of sorting.).

Conners does not expressly disclose at least one further measurement system for determine positions of individual points on the log end.

However, Bennet discloses at least one further measurement system for determine positions of individual points on the log end (col. 9 line 60 – col. 10 line 10, i.e. the examiner interprets that the system finds the center of the log end piece, and determines distance along the axis of the log to create log surface profile.).

Conners & Bennet are combinable because they are from the same field of endeavor i.e. lumber sorting by image processing (col. 1 lines 5-20, Conners) & (col. 1 lines 20-67, Bennet).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Bennet into the system of Conners.



The suggestion/motivation for doing so would have been to provide a full model of log's surface, rather just silhouette, and to model the log's cross sections using enough surface points to accurately reflect the shape of the log, rather than using approximating circles or ellipses (col. 3 line 25-50), as taught by Bennet.

Therefore, it would have been obvious to combine Conners with Bennet to obtain the invention as specified in claim 13.

In regards to claim 9, Conners in view of Bennet discloses the optical image analysis system comprises a non-transradiating measuring system, which creates an image of a log end (col. 4 lines 5-10).

In regards to claim 10, Conners in view of Bennet discloses the another measuring system is an under bark measuring system is an under bark measuring system, which determines positions for individual points in the log (col. 8 line 55- col. 9 line 5).

In regards to claim 11, Conners in view of Bennet discloses the another measuring system is an on bark measuring system, which determines positions for individual points on the log (col. 18, '070).

### ***Conclusion***

**Examiner note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.

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Although the specified citations are representative of the teaching for the art and are applied to the specific limitations within the individual claim, other passages and figures may applied as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potential teaching all or part of the claimed invention, as well as the context of the a passage as taught by the prior art or disclosed by the examiner.

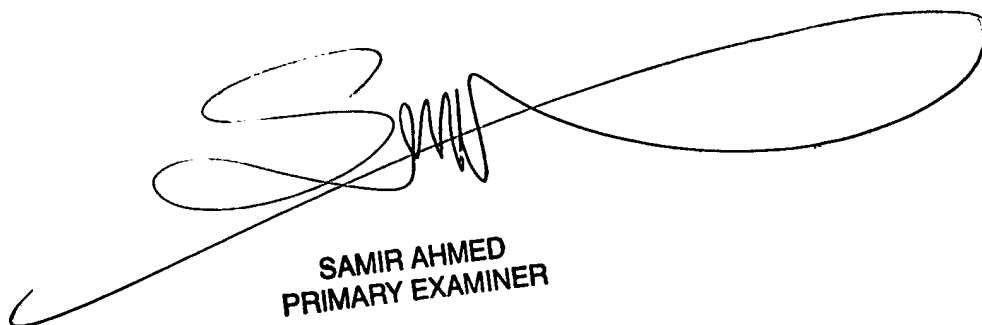
Any inquiry concerning this communication or earlier communications from the examiner should be directed to O'Neal R. Mistry whose telephone number is (571) 272-4052. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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